CITY OF LINCOLN
COUNTY OF LANCASTER
Vince M. Mejer, CPPO, C.P.M.
Purchasing Agent
(402) 441-7410 Fax: (402) 441-6513

QUOTATION REQUEST

Quote Prices F.O.B. Destination
Lincoln, Nebraska

Date -	11/19/02
Order No.-	1310 OQ
Date Due -	11/21/02

QUOTATIONS MUST BE RECEIVED IN THE PURCHASING DIVISION OFFICE BY THE DUE DATE SPECIFIED ABOVE

PLEASE MAKE NECESSARY VENDOR INFORMATION CORRECTIONS ON THIS FORM:

VENDOR INFORMATION

Return Quotation Request To:

Purchasing Division
K-Street Complex
440 S 8th St Ste 200
Lincoln NE 68508
Kopplin, Tom - Quotes Buyer

Item Number / Description	Quantity	UM	Unit Price	Total Price
4909300 Model 4230 ISCO bubbler Used for pH recording Model 4230 ISCO bubbler or City approved equal.	2	EA		
4909300 FLOW METERING EQUIPMENT Ph probes for monitoring progr FLOW METERING EQUIPMENT as per attached spec.	2	EA		

VENDOR MUST COMPLETE THE FOLLOWING

The undersigned represents and warrants that he/she has full and complete authority to submit this quotation and to enter into a contract upon acceptance by the City/County. The undersigned agrees to comply with all conditions above and on reverse side of this document.

COMPANY NAME _____
ADDRESS _____
_____
TELEPHONE _____
EMPLOYER FEDERAL ID NO. OR
SOCIAL SECURITY NUMBER _____

BY (PRINT NAME) _____
SIGNATURE _____
TITLE _____
DATE _____
DELIVERY SCHEDULE _____
DAYS ARO

BID SPECIFICATIONS
FOR
PERMANENT WASTEWATER pH MONITORING EQUIPMENT

1. OVERVIEW AND SCOPE

1.1 At this time the Wastewater Division of the City of Lincoln intends to install two (2) portable wastewater pH monitors within the collection system at various industrial service locations.

1.1.1 Depending upon bids received, the City reserves the right to purchase up to an additional five (5) total units.

1.1.2 This system is intended to provide accurate, sensitive, convenient and reliable method for determination of wastewater pH data for industrial effluent compliance.

1.1.3 The system is intended to provide flow data within +/- 3.5% accuracy.

1.1.4 There shall be furnished a recording pH meter suitable for portable or fixed-site monitoring, with the added capability of level determination. A bubbler system shall be used to measure level.

1.1.5 The meter shall also be capable of activating a wastewater sampler based on a combination of level or pH measured.

1.2 The monitoring contractor shall be responsible for the manufacture, procurement and furnishing of all materials, communication device, and software required to properly place into operation the pH monitoring station as hereinafter specified.

1.2.1 All installations of the pH monitoring devices shall be installed by city.

1.3 The contractor will supply all hardware and firmware for each location consisting of:

1.3.1 A monitor installed in an industrial sampling station or collection system access hole functioning as a data logger, communications device and sensor command unit.

1.3.2 Installation hardware for mounting sensors and the flow monitor within the access hole.

1.3.4 A communication connection to the data logger to allow for the downloading of information from the logger to a lap-top personal computer

1.4 The City of Lincoln Monitoring Staff shall install the pH monitor and sensors in the collection system.

1.4.1 The contractor shall provide detailed onsite installation instructions at a typical location.

2. QUALIFICATION AND BID REQUIREMENTS

2.1 Experience

2.1.1 The Contractor acknowledges that the wastewater system, consisting of sewer lines and manholes, is a hostile environment for collecting flow information.

2.1.2 The Contractor is required to have extensive knowledge and expertise based on a minimum of five years of related experience in pH monitoring.

2.2 Detailed Technical Submittals

2.2.1 A complete technical submittal, with descriptive brochures and engineering data covering the items of equipment offered, shall be submitted with the bid.

2.2.2 The Technical Submittals shall describe in detail how the contractor's system complies with each specification requirement of this document.

2.2.3 Copies of typical charts, tabulations and reports from projects of similar scope and complexity shall be included.

2.2.4 Any deviations from the specifications must be noted in the Specifications Check List.

2.2.5 The Technical Submittal shall include a standard Operations and Maintenance Manual for the flow monitoring units and software.

2.2.5.1 The manual shall include all the information needed to operate and maintain the flow monitoring system and shall include a discussion of equipment operations theory, a description of standard operating procedures, flow optimization maintenance and preventive maintenance.

2.6 References

2.6.1 The contractor shall submit a list of five (5) specific references. The references shall consist of names, titles, addresses, and telephone numbers of individuals who have responsibility for operation of flow monitoring equipment that has been manufactured by the contractor and is comparable in design, construction and use to the units specified that the contractor has furnished.

2.7 Other Contractor Qualifications

2.7.1 In determining the most acceptable proposal the City shall also consider whether the contractor has provided evidence of the following:

2.7.1.1 **Patent and Hold Harmless Certifications** - The contractor shall provide certification that they hold or have license to all applicable patents and shall indemnify and save harmless the City from all liabilities, judgments, costs, damages and expenses which may result from the infringement of any patents, trademarks, and copyrights by reason of the use of any proprietary materials, devices, equipment or processes incorporated in or used in the performance of the work under this contract.

4. DETAILED MONITOR SPECIFICATIONS

4.1 The equipment shall consist of a flow monitor -installed in the access hole functioning as a pH data logger, communications device and sensor command unit.

4.2 Each unit shall be furnished with a data logger, a pH/temperature measurement sensor with cable connections to the logger.

4.3 Appropriate hardware for installation of the sensors, and mounting hardware to secure the equipment shall be provided.

4.4 **Data Logger**

4.4.1 **Housing** - Waterproof, submersible, dust-tight, corrosion resistant enclosure with a mounting bracket and handle designed to be installed in the access hole.

4.4.2 **Mounting** - Data Logger shall be able to be mounted to the manhole wall or rung.

4.4.2.1 Logger shall have a handle that is easily grasped to facilitate installation and removals.

4.4.3 **Power Supply** - The flow meter shall require 12 volt DC power for operation. Power shall be supplied from a [(rechargeable nickel cadmium battery) (rechargeable lead acid battery) (rechargeable lead acid battery with solar panel battery charger) (120 VAC power converter/battery charger) (240 VAC power converter/battery charger) (120 VAC power converter with built-in backup battery) (240 VAC power converter with built-in backup battery) (companion ISCO sampler).

4.4.5 **Electronics** - The flow meter shall have an RS-232 serial output to transmit information on all of its current readings. The data on the serial output shall be in ASCII format with values separated by commas.

4.4.10 **Data Integrity** - All communications shall have adequate error detection and correction to ensure that no data from the logger is corrupted or lost during communications.

4.4.11 **Memory** - Shall support a circular buffer with the oldest data only being written over once the memory is filled.

4.4.12 **Data Recording Interval** - Shall support data recording rates at standard intervals of 1, 5, 15, and 30 minutes or 1 or 2 hours.

4.4.13 **Temperature Range** - Shall function with specifications between 0 and 50^0 C.

4.4.14 **Clock** B Unit shall have battery-backed crystal controlled hardware real-time clock/calendar.

5. SOFTWARE

5.1 Monitor Configuration, Communication and Diagnostic Software shall operate on a all Microsoft[7] Windows[7] modules including 98, 2000 or Windows XP platform.

5.5 **Data Analysis Software** - shall have the following minimum requirements:

5.5.1 Software shall function on all Microsoft Windows modules including 98, 2000, and Windows XP operating systems.

5.5.2 Use the Windows Explorer interface.

5.5.3 Shall support Online Help that will include as a minimum: object help, and standard Windows, Content, Index, and Find Help.

5.5.4 Shall store flow data in Microsoft[7] Access[7] database format allowing for easy export to other software applications.

5.5.5 Shall support display of data in different unit types without exiting the program.

5.5.6 A software user's guide shall be provided in both a hard-copy format as well as part of the installation CD.

5.6 **Data Acquisition** - Shall support communications via modem and on-site via direct serial connect.

5.8 **Data Reporting** - Shall support the cut, copy and paste commands of Microsoft Windows.

5.8.1 Shall support the running of reports for individual locations and a group of locations.

5.8.2 User shall be able to define headers and footers for reports.

5.8.3 User shall be able to output reports on-demand or schedule the reports to run at a user-specified time.

5.8.4 The report shall support the overlay of contiguous data from adjacent time periods.

5.8.5 Shall support the creation of a report showing the percent availability of the data for user-specified data types.

5.8.6 Templates shall be provided for running daily, weekly, quarterly, yearly and user-defined interval hydrograph reports.

6. WARRANTY

6.1 All components of the metering system including mounting hardware, sensors, connecting cables, monitor shall carry as a minimum, a one year warranty against defective materials and workmanship.

6.1.1 Freight costs shall be included at no cost to the City.

6.2 The warranty period shall commence upon acceptance of the units.